



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,200	07/18/2000	Alexander L. Berestov	4865 (CFP01668US)	9680
5514	7590	08/02/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			HADIDI, JON	
			ART UNIT	PAPER NUMBER
			2671	

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/618,200

Applicant(s)

BERESTOV, ALEXANDER L.

Examiner

Jon Hadidi

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on April 25, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5-6, 12, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5-6, 12, and 17 recites the limitation "the reference point" in line 3 of claim 5, in line 5 of claim 12, and in line 5 of claim 17. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell, U.S. Patent No. 6,766,343.

With regard to claim 1, Bell teaches acquiring a first coordinate system data set (Fig. 2, Source Coord. System 10); and formatting the first coordinate system data set

into non-Cartesian representation (NCR) format (Fig. 2, Target Coord. System 20 and col. 3, lines 23-30). However, Bell fails to explicitly describe storing the resulting formatted data set in NCR format, as further recited in claim 1. Official notice is hereby taken that storing formatted data sets is notoriously well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to store the resulting formatted data set in NCR format so that the resulting formatted data set may be displayed by display 114 of Fig. 13 (see col. 14, lines 6-12), and/or so that the resulting data set may be converted into any other type of coordinate system data set at a later time.

With regard to claim 2, Bell teaches acquiring a second coordinate system data set (Fig. 2, Common Coordinate System 26), and wherein the formatting step formats the second coordinate system data set into NCR format (Fig. 2, Target Coordinate System 20 and col. 3, lines 23-30).

With regard to claim 3, Bell teaches wherein the first coordinate system data set is described using a non-cartesian coordinate system (col. 3, lines 23-30).

With regard to claim 4, Bell fails to explicitly describe wherein the second coordinate system data set is described using a Cartesian coordinate system. Official notice is hereby taken that using a Cartesian coordinate system is notoriously well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to use a Cartesian coordinate system as the second coordinate system (Fig. 2, Common Coordinate System 26) because coordinate

system conversions are preformed with respect to the common coordinate system (see Abstract) and the Cartesian coordinate system is the most common, utilized and recognized coordinate system in use.

With regard to claim 5, Bell teaches a file header (generally col. 8, lines 22-38, specifically col. 8, line 30, class CoordSys), and a header of the reference point (generally col. 8, lines 22-38, specifically col. 8, line 24 and line 36, CsPoint*).

With regard to claim 6, Bell teaches a transformation field (generally col. 8, lines 22-38, specifically col. 8, line 24 and line 36, convtoRef and convfromRef), and a type of coordinate system field (generally col. 8, lines 22-38, specifically col. 8, line 30, class CoordSys).

With regard to claim 7, Bell teaches a central processing unit (Fig. 13, PROC. 112). However, Bell fails to explicitly describe a memory unit as further recited in claim 7. Official notice is hereby taken that memory units are notoriously well known in the art. It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to include a memory unit so that coordinate system conversion programs may be stored and executed, in addition, to allow the resulting coordinate system data sets to be displayed by display 114 of Fig. 13, and/or to allow the resulting data sets to be converted into other types of coordinate system data sets at a later time.

With further regard to claim 7, Bell teaches a data acquisition module for acquiring a first coordinate system data set (Fig. 13, camera 116 and col. 14, lines 6-12); a formatting module in communication with the data acquisition module and

configured to format the first coordinate system data set into NCR format (Fig. 13, PROC. 112 and Fig. 2, Target Coord. System 20 and col. 3, lines 23-30). However, Bell fails to explicitly describe a storage module in communication with the formatting module and configured to store the NCR formatted data, as further recited in claim 7. Official notice is hereby taken that a storage module is notoriously well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to store the resulting formatted data set in NCR format in a storage module so that the resulting formatted data set may be displayed by display 114 of Fig. 13 (see col. 14, lines 6-12), and/or so that the resulting data set may be converted into other types of coordinate system data sets at a later time.

With regard to claim 8, Bell teaches the data acquisition module is adapted for acquiring a second coordinate system data set (Fig. 2, Common Coordinate System 26), and wherein the formatting module is adapted for formatting the second coordinate system data set into NCR format (Fig. 2, Target Coordinate System 20 and col. 3, lines 23-30).

With regard to claim 9, Bell teaches wherein the formatting module is adapted to format the acquired data into a file structure, the file structure comprising a transformation field (generally col. 8, lines 22-38, specifically col. 8, line 24 and line 36, convtoRef and convfromRef), and a type of the coordinate system field (generally col. 8, lines 22-38, specifically col. 8, line 30, class CoordSys).

With regard to claim 12, Bell teaches wherein the formatting module formats the acquired data into a file structure, the file structure comprising a file header (generally

col. 8, lines 22-38, specifically col. 8, line 30, class CoordSys), and a header of the reference point (generally col. 8, lines 22-38, specifically col. 8, line 24 and line 36, CsPoint*).

With regard to claim 13, Bell teaches wherein the first coordinate system data set is described using a non-Cartesian coordinate system (col. 3, lines 23-30).

With regard to claim 14, Bell fails to explicitly describe wherein the second coordinate system data set is described using a Cartesian coordinate system. Official notice is hereby taken that using a Cartesian coordinate system is notoriously well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to use a Cartesian coordinate system as the second coordinate system (Fig. 2, Common Coordinate System 26) because coordinate system conversions are preformed with respect to the common coordinate system (see Abstract) and the Cartesian coordinate system is the most common, utilized and recognized coordinate system in use.

With regard to claim 15, Bell teaches a data acquisition module for acquiring a first coordinate system data set (Fig. 13, camera 116 and col. 14, lines 6-12); a formatting module in communication with the data acquisition module and configured to format the first coordinate system data set into NCR format (Fig. 13, PROC. 112 and Fig. 2, Target Coord. System 20 and col. 3, lines 23-30). However, Bell fails to explicitly describe a storage module in communication with the formatting module and configured

to store the NCR formatted data, as further recited in claim 7. Official notice is hereby taken that a storage module is notoriously well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to store the resulting formatted data set in NCR format in a storage module so that the resulting formatted data set may be displayed by display 114 of Fig. 13 (see col. 14, lines 6-12), and/or so that the resulting data set may be converted into other types of coordinate system data sets at a later time.

With regard to claim 16, Bell teaches the data acquisition module is adapted for acquiring a second coordinate system data set (Fig. 2, Common Coordinate System 26), and wherein the formatting module is adapted for formatting the second coordinate system data set into NCR format (Fig. 2, Target Coordinate System 20 and col. 3, lines 23-30).

With regard to claim 17, Bell teaches a file header (generally col. 8, lines 22-38, specifically col. 8, line 30, class CoordSys), and a header of the reference point (generally col. 8, lines 22-38, specifically col. 8, line 24 and line 36, CsPoint*).

With regard to claim 18, Bell teaches a transformation field (generally col. 8, lines 22-38, specifically col. 8, line 24 and line 36, convtoRef and convfromRef), and a type of the coordinate system field (generally col. 8, lines 22-38, specifically col. 8, line 30, class CoordSys).

With regard to claim 19, Bell teaches wherein the first coordinate system data set is described using a non-cartesian coordinate system (col. 3, lines 23-30).

With regard to claim 20, Bell fails to explicitly describe wherein the second coordinate system data set is described using a Cartesian coordinate system. Official notice is hereby taken that using a Cartesian coordinate system is notoriously well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to use a Cartesian coordinate system as the second coordinate system (Fig. 2, Common Coordinate System 26) because coordinate system conversions are preformed with respect to the common coordinate system (see Abstract) and the Cartesian coordinate system is the most common, utilized and recognized coordinate system in use.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell, U.S. Patent No. 6,766,343, in view of Bullister, U.S. Patent No. 5,751,275, and in further view of Lynch, U.S. Patent No. 5,835,693.

With regard to claim 10, Bell is relied upon for teaching all of the limitations of parent claim 9, as discussed above. Bell fails to explicitly describe the transformation field is a direction cosines field and the direction cosines field comprises nine direction cosines, as recited in claim 10. However, Bullister teaches the limitations of claim 10 (col. 10, lines 24-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to include the direction cosines of Bullister, because directional cosines are easy to compute and are well known in the art to be

Art Unit: 2671

used for transforming one coordinate system to another coordinate system, like the coordinate system conversion apparatus of Bell. Support for such a motivation may be found, for example, in Lynch, col. 26, line 64 to col. 27, line 10.

With regard to claim 11, Bell is relied upon for teaching all of the limitations of parent claim 9, as discussed above. Bell fails to explicitly describe the transformation field is a direction cosines field and the direction cosines field comprises six direction cosines, as recited in claim 11. However, Bullister teaches nine direction cosines (col. 10, lines 24-36), and since claim 11 uses 'comprising' language, Bullister reads on the six direction cosines of claim 11.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Bell to include the direction cosines of Bullister, because directional cosines are easy to compute and are well known in the art to be used for transforming one coordinate system to another coordinate system, like the coordinate system conversion apparatus of Bell. Support for such a motivation may be found, for example, in Lynch, col. 26, line 64 to col. 27, line 10.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Hadidi whose telephone number is 703-605-1187.

The examiner can normally be reached on M-F 8:00-4:30.


Application/Control Number: 09/618,200
Art Unit: 2671

Page 10

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman can be reached on 703-305-9798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JH


MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600